Coming to the Reefton group, the Inglewood Extended tunnel, on the eastern portion of the belt, has been driven 1,300ft. easterly to the Inglewood and Phœnix line of reef, which has been worked from the tunnel-level up to the surface, some 500ft. in vertical height, and about 100ft. below the tunnel. This deepest portion could not be examined, being filled with water, but from the description given me it appears that the reef becomes smaller and poorer there. The length of the block of stone is about 100ft., and it thins out either way, though at the south end, in the tunnel-level, it merges into a dark-green dyke-stone, containing quartz and calcite veins, and said to have proved auriferous.

At the Golden Fleece Extended Mine, on the Ajax line of reef, the shaft is down 500ft. to the No. 5 level, where a tribute party—after draining the mine, which had for some years lain idle—have started work on a block of stone hitherto neglected on account of its being considered rather poor, the yield being stated at about 9dwt. per ton. This block probably extends to the surface, and in the stopes shows a very good formation of lode, having a strike north-north-east, a west-north-west underlie, and very well-defined walls, between which the stone is 2ft. thick, and of excellent appearance. Some of the quartz in the worked-out blocks was as much as 10ft. in thickness. This reef generally makes in blocks, some of which do not come to the surface, but are connected with one another by tracks.

The Keep It Dark Mine is the deepest on the field as regards sea-level. The main shaft is down 475ft. to the No. 3 level, and thence a blind shaft descends 350ft. to No. 5 level. The course of the reef takes nearly a horse-shoe shape, turning from north and south to east and west. The quartz makes in blocks which seem to have a generally westerly pitch, and where the stone is absent a pretty-well-defined track is visible. The containing rocks are slaty rubbly shales, much jointed and "shook," and show some signs of synclinal folding, but no marked change in general character with the increased depth.

The shaft of the Keep It Dark No. 2 Mine is 450ft. deep to the lowest level, at which the drive along the lode shows a large well-marked track, but little stone; the dark slaty hanging-wall shows evidence of friction. This drive is being extended to meet the block of stone worked above, which averaged 3ft. thick, and was left passing under foot. The reef in the upper stopes is well-defined.

In the Wealth of Nations Mine the lowest workings—320ft. below tunnel-level—show several great bodies of quartz—one about 8ft. thick at top of drive and thinning to a wedge at the bottom underlies north-westerly; another close to it swells to a great width in one place, and rests on a sort of floor, pitching to the south-west, the underlie being south-eastward, where the stone takes its normal width. The containing rock here is of the ordinary character.

Coming to the southern group of workings, there is very little variation as regards general features. The Progress, the Cumberland, and the Globe Mines all show quartz making in blocks, sometimes swelling to many feet in thickness and then thinning out into tracks.

The Golden Lead Mine, at Merrijigs, is somewhat exceptional as regards its features, the gold being contained in certain soft clayey or "pug" veins from an inch to a foot thick, carrying gritty quartz and traversing sandstone. A low-level tunnel is being driven to strike the Golden Lead reef 400ft. below present workings; it was in about 400ft. at the time of my visit, and had to be driven some 1,300ft. further to reach the reef. A large quartz reef and also a wide "track" containing a little quartz had been passed through, but had not been proved auriferous. This tunnel is an excellent prospecting work.

Having so far stated the leading features of the mines, it may be advisable to point out the difference between the conditions obtaining in the Reefton auriferous rocks and in those of Victoria. In the first place, the geological age of the former is, as before stated, Carboniferous, while that of the latter is Silurian, or very far lower in geological sequence. The Silurian rocks of Victoria, especially the Lower Silurian, are usually easily fissile and definable, band from band, the slates or sandstones respectively being frequently traceable in strike for miles. They are folded in well-marked successions of more or less acute anticlinal and synclinal curves, and, though by no means free from faultings and joints, do not show the evidence of such crushing and repeated movements as do the Reefton Carboniferous beds, and have consequently afforded good natural facilities for the formation of well-defined reefs or lodes. Even under these favourable conditions, however, the Victorian reefs alternately pinch to mere tracks and enlarge to varying-sized bodies of quartz, or die out in strings of quartz longitudinally or downwards. The gold occurs in shoots greater or less distances apart, and these shoots often die out in every direction. On the other hand, it has been found that in many cases the reefs and gold-shoots make again in depth, and this fact has of late years largely tended to stimulate Victorian mining enterprise, with very gratifying results.

In the Reefton rocks, the bedding and general structure is less easily discernible than in the Silurian rocks of Victoria; and whereas the latter—especially the Lower Silurian—are traversed by great belts of quartz reefs traceable for scores of miles, and by innumerable veins, leaders, and strings of quartz in the country rock between the major lodes, the lodes in the former are comparatively few and there is a great paucity of minor veins of quartz.

The prevailing feature of the Reefton lodes is that the auriferous stone occurs in blocks at greater or less intervals apart. These blocks are of varying length and pitch, or dip in their strike. The direction of strike of the reefs varies from north and south to nearly east and west, though the general bearing is between north-west and north-east, and, with exception of the Boatman's Creek reefs, the underlie is to the westward. The blocks of stone have in places been worked to a great thickness—as much as 10ft. to 30ft. in some instances—and they thin out either way to mere tracks or fissure-planes, usually carrying a "dig" of soft material with more or less quartz, sometimes easily distinguishable, sometimes indistinct and traceable with difficulty.

Though the first discovered blocks of quartz outcropped at the surface, several instances have occurred where, during mining operations, others have been found which did not extend to the